

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS**

SUDENGA INDUSTRIES, INC.,

Plaintiff,

v.

GLOBAL INDUSTRIES, INC.,

Defendant.

Case No. 18-2498-DDC-JPO

MEMORANDUM AND ORDER

This is a patent infringement lawsuit involving agricultural bin sweep technology. Plaintiff Sudenga Industries, Inc. filed this lawsuit, alleging that defendant Global Industries, Inc. has infringed on three of its patents. The three patents—U.S. Patent Numbers 8,616,823 (“the ’823 patent”), 9,206,001 (“the ’001 patent”), and 10,017,338 (“the ’338 patent”)—cover plaintiff’s agricultural bin sweep technology.

This case comes before the court now on the parties’ request that the court construe two terms in the three patents as a matter of law under *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). Defendant has submitted a claim construction brief urging the court to adopt its proposed constructions of the two disputed terms in the patents. Doc. 73. Plaintiff has responded. Doc. 77. And defendant has replied. Doc. 79. The court has considered the information submitted by the parties as well as the oral arguments presented at the *Markman* hearing on August 30, 2019, and construes the two disputed terms in the fashion explained below.

I. Legal Standard

A patent must describe the “exact scope of an invention” so that the patentee secures its right to “all to which [the patentee] is entitled” and informs “the public of what is still open to them.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) (quoting *McClain v. Ortmayer*, 141 U.S. 419, 424 (1891)). A patent document contains two distinct elements: (1) a specification which “describ[es] the invention ‘in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same;’” and (2) one or more claims which “particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as [the applicant’s] invention.” *Id.* (quoting 35 U.S.C. § 112 (further citations omitted)).

A patent’s claims define the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). “A claim covers and secures a process, a machine, a manufacture, a composition of matter, or a design, but never the function or result of either, nor the scientific explanation of their operation.” *Markman*, 517 U.S. at 373 (citation and internal quotation marks omitted). The claims serve “to forbid not only exact copies of an invention, but [also] products that go to the heart of an invention but avoid[] the literal language of the claim by making a noncritical change.” *Id.* at 373–74 (citation and internal quotation marks omitted).

In a patent infringement case, the court must determine whether the patent claims cover the alleged infringer’s product. *Id.* at 374 (citation omitted). To do so, the court must decide what the words in the claim mean. *Id.* (citation omitted); *see also Bushnell, Inc. v. Brunton Co.*, 673 F. Supp. 2d 1241, 1250 (D. Kan. 2009) (explaining that “[p]roof of infringement requires construction of the patent claims to determine their scope and comparison of the construed claims to the accused device.” (citing *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1370 (Fed. Cir. 2007) (further citations omitted))).

The Federal Circuit Court of Appeals established guiding principles for claim construction in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Claim construction begins by considering the language of the claims themselves. *Id.* at 1312 (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (further citations omitted)). When construing claim terms, the court generally should give terms their ordinary and customary meaning. *Id.* (citation omitted). The “ordinary and customary meaning” is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” *Id.* at 1313 (citations omitted). The claims themselves provide “substantial guidance” for determining “the meaning of particular claim terms.” *Id.* at 1314. And both “the context in which a term is used in the asserted claim” and the “[o]ther claims of the patent in question” also help determine the term’s ordinary meaning. *Id.*

The patent’s claims, however, “do not stand alone.” *Id.* at 1315. Instead, the claims “are part of a fully integrated written instrument consisting principally of a specification that concludes with the claims.” *Id.* (citation and internal quotation marks omitted). Therefore, the court must read the claims “in view of the specification, of which they are a part.” *Id.* (citation and internal quotation marks omitted). The Federal Circuit has described the specification as “the single best guide to the meaning of a disputed term,” and “[u]sually it is dispositive.” *Id.* (citation and internal quotation marks omitted).

The specification may contain “a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess.” *Id.* at 1316. When the specification contains a special definition, the patentee’s definition controls. *Id.* Alternatively, the specification “may reveal an intentional disclaimer, or disavowal, of claim scope by the

inventor.” *Id.* When the specification contains a disclaimer, the patentee “has dictated the correct claim scope, and [the patentee’s] intention, as expressed in the specification, is regarded as dispositive.” *Id.* (citation omitted). But the Federal Circuit has “expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Id.* at 1323. In the end, the court must construe the claim in a way that ““stays true to the claim language and most naturally aligns with the patent’s description of the invention.”” *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

The court “should also consider the patent’s prosecution history, if it is in evidence.” *Id.* at 1317 (citation and internal quotation omitted). The prosecution history is considered “intrinsic evidence” and it includes “the complete record of the proceedings before the [Patent and Trademark Office (“PTO”)] and includes the prior art cited during the examination of the patent.” *Id.* (citation omitted). Like the specification, the prosecution history helps demonstrate how the inventor understood the patent during the process of explaining and securing the patent. *Id.* But “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* Still, the prosecution history may illuminate the meaning of the claim language by showing how the patentee understood the invention and whether the patentee limited the claim language during the prosecution, thereby narrowing the claim’s scope. *Id.* (citations omitted).

Last, the court may rely on extrinsic evidence when construing the claims. *Id.* (citation omitted). Extrinsic evidence includes “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* (citation

and internal quotation marks omitted). Dictionaries and treatises can provide useful tools to help a court determine the meaning of a term to those skilled in the art in question. *Id.* at 1318. But as the Federal Circuit has cautioned, extrinsic evidence is less reliable than the patent and prosecution history. *Id.* It is useful only if considered in the context of the intrinsic evidence. *Id.* at 1319. The court thus has discretion to admit and consider extrinsic evidence but “should keep in mind the flaws inherent in each type of evidence and assess that evidence accordingly.” *Id.*

II. Analysis

The parties ask the court to construe two terms, phrases, or clauses from the ’823, ’001, and ’338 patents: (1) “collector ring,” and (2) “a pivot stand attached to a top surface of the floor grate.”

The disputed terms appear in Claims 1–8 of the ’823 patent, Claims 1–11 of the ’001 patent, and Claims 1–23 of the ’338 patent. The technology disclosed in the three patents—described generally—is a system for sweeping excess grain out of grain bins. The “bin sweep” rotates around a center hole in the grain bin and uses a linear conveyor to sweep the excess grain to the center of the bin. The system is designed to sit atop the bin’s center grate, not underneath it.

The first patent to issue was the ’823 patent. The ’338 and ’001 patents are continuations of the ’823 patent, meaning that they issued from the same original application. Plaintiff considers the ’338 patent as “representative of all of the Patents-in-Suit” and primarily cites to the ’338 patent. Doc. 77 at 3. One disputed term appears only in the ’823 patent, and thus it is cited accordingly.

The parties agree on the construction of three other terms. The court agrees with the parties’ proposed construction and construes those three claims as follows: (1) a “sweep mechanism” is a “mechanism for moving solid material, including an auger with flighting, a chain with paddles, a belt, a cleated belt, or the like”; (2) a “linear conveyor” is a “mechanism for moving solid material, including an auger with flighting, a chain with paddles, a belt, a cleated belt, or the like”; and (3) “extending above a top surface of the floor grate” means that “the given element extends above the top surface of the floor grate, but is not necessarily attached to the top surface of the floor grate.”

The court now turns to the two disputed terms. This court’s analysis, below, begins by providing the parties’ proposed constructions in table format. The court then explains the reasoning each party argues to support their proposed constructions in the text. And last, the court decides the appropriate construction, applying the guiding principles recited in Part I of this Order.

A. “collector ring”

Term	Plaintiff’s Construction	Defendant’s Construction
collector ring	An electromechanical device also called a ‘slip ring’ that allows the transmission of power and/or electrical signals from a stationary to a rotating structure. Further, a ‘housing’ recited in the claims of the asserted patents is separate from a casing, enclosure, or the like that is part of the recited ‘collector ring’ itself.	Slip ring. The housing recited in the claims is not separate from the “collector ring” itself.

The parties’ dispute over this term orbits around the claim’s reference to a housing. Does it necessarily refer to a housing that is separate from any covering or casing on the collector ring

itself? The parties agree that the term “collector ring” is synonymous with the term “slip ring.” Doc. 73 at 6; Doc. 77 at 18. Plaintiff asserts that the housing recited in the patent is necessarily separate from the collector ring casing and that the casing is part of the collector ring. Defendant asserts that nothing in the record compels a finding that a person of ordinary skill in the art would have understood the housing as something necessarily is separate from any casing or housing around the collector ring.

Plaintiff makes three arguments to support its construction.

First, plaintiff asserts the patent claim language supports its construction that the collector ring and housing are separate. Plaintiff contends that the ’338 patent, the ’001 patent, and the ’823 patent all reference the housing and collector ring separately. For example, independent claim 1 of the ’823 patent asserts “a collector ring having a first stationary portion and a second rotatable portion” and “a housing surrounding the collector ring, wherein the housing and second rotatable portion of the collector ring rotate together about the pivot axis, wherein the housing is attached to a drive unit on one side and to an auger section on the other side.” Doc. 73-1 at 10 (col. 6 ll. 8–14). Similar language appears in the ’338 patent. It recites: “a collector ring having a stationary portion and a second rotatable portion” and “a housing covering at least a top of the collector ring, wherein the linear conveyor extends away from the housing, and wherein the first drive unit is positioned adjacent the housing.” Doc. 73-7 at 11 (col. 5 ll. 63–64 and col. 6 ll. 13–16). And the ’001 patent asserts: “a collector ring having a first stationary portion and a second rotatable portion” and “a housing surrounding the collector ring, wherein the housing is adjacent to the sweep mechanism on one side and is adjacent to the first drive unit on the other side.” Doc. 73-6 at 11 (col. 6 ll. 9–10 and 21–23). Plaintiff also cites

other language from the patents describing the housing as “removable” and with a “sloped top cover.” Doc. 73-7 (col. 8 ll. 18 and 21).

In contrast, defendant’s argument asserts that the definition of a slip ring, as used in plaintiff’s patent description and in dictionaries, does not require a collector ring to have a housing or a casing. Defendant asserts that plaintiff “acted as its own lexicographer” by defining the term “slip ring.” Doc. 73 at 10. Defendant cites plaintiff’s description of a slip ring in the “Background” section of the ‘823 patent: “A slip ring, also called a collector ring, is typically used as a rotary coupling to transfer electric current from a stationary unit to a rotating unit.” Doc. 73-1 at 8 (col. 1 ll. 53–55). Finally, defendant notes two other places where plaintiff defined “collector ring” without referencing a casing. Doc. 73 at 11 (citing Doc. 73-9 and Doc. 73-10). Defendant points to multiple technical dictionaries that do not include a “housing” in the definition of “collector ring.” Doc. 73 at 11–12. Defendant notes that the Wikipedia website cited by plaintiff also does not depict a collector ring inside of a housing.

But plaintiff did not serve as its own lexicographer here. To serve as one’s own lexicographer requires the “patentee [to] clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (internal quotations omitted). Plaintiff’s patents never define “collector ring” to include a housing or a casing. Instead, the claims refer to the collector ring separately from the housing. And, they never mention a casing. The court must construe the claim in a way that “‘stays true to the claim language and most naturally aligns with the patent’s description of the invention.’” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). The court thus declines to construe the claim in a way that requires the claimed housing to be part of the collector ring. And, the

court cannot construe the term “collector ring” as a term that necessarily includes a casing around that collector ring.

Second, plaintiff asserts that the specification of each patent makes clear that the collector ring can include a “conventional casing” separate from the housing. Plaintiff cites Figure 2 of the provision application, which shows both the “Rotary Electrical Collector Ring” and “Collector Ring Housing” as separate components. Doc. 77 at 14. Plaintiff asserts the figures of the asserted patents depict the collector ring in the same manner as to the provisional application. *Id.* at 15. Plaintiff also cites the description of the device in the ’338 patent: “In the current state of the art, a slip ring housing is typically contained within the central sump, below the floor level of the bin” and “[a]s is conventional, collector ring 36 has a casing (its rotatable portion) and a plate (its stationary portion).” Doc. 73-7 at 9–10 (col. 1 ll. 64–65 and col. 4 ll. 58–60).

Plaintiff also directs the court to additional language in the patent specification that describes the “housing” as connected to the “casing.” “The casing of collector ring 36 is held within collector ring housing 26 by cross bar 52 and band 54 so that the casing of collector ring 36 and collector ring housing 26 are connected together for coupled rotation about central pivot axis.” *Id.* at 10–11 (col. 4 ll. 67 and col. 5 ll. 1–4). Finally, plaintiff notes, its position on the collector ring housing has been consistent throughout the patent process. This includes, plaintiff asserts, the prosecution stage, where it referred to the collector ring and housing as “separate elements.” Doc. 73-9 at 8.

Defendant turns to the language of the patent claims, noting that the claims “separately claim a housing.” Doc. 73 at 13. Defendant asserts that this position is consistent with its construction of the term “collector ring” as not requiring a “casing” in all circumstances. Defendant notes that plaintiff has reason to “re-write the claims to include a second housing”

because prior art may render plaintiff's patent invalid. Doc. 73 at 14. Also, defendant claims plaintiff's drawing depicts a "bare" collector ring "encased by a separate housing." Doc. 73 at 14–15 (citing Doc. 73-14). Defendant asserts that the drawings of the collector rings depict a "cup-like rotary part," not a separate housing about the component. *Id.*

The court declines to find that a casing is always required. Plaintiff concedes that the claims do not require a casing around the collector ring. Doc. 77 at 21. But the court finds, reading the patent as a whole, that any referenced casing is not part of the claimed housing. While the court recognizes the claimed device could contain a casing surrounding the collector ring that is separate from both the collector ring and the housing (as described in the specification), the claims themselves do not dictate that outcome. The court is mindful that it walks a fine line when it reads the claims in light of the specification and that it must be careful not to limit the claims in an impermissible way in light of the specification. *Phillips*, 415 F.3d at 1323. And, "attempting to resolve the [dispute] in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specifications or divorcing the claim language from the specification." *Id.* at 1323–24.

Third, plaintiff contends that the patent's use of the term "collector ring" and during prosecution is consistent with "ordinary and customary usage." Doc. 77 at 16–17. Plaintiff asserts that collector rings are "generally a purchased piece part that includes a casing." To support this claim, plaintiff cites a parts list describing the slip ring as "purchased." Doc. 73-14. Plaintiff also directs the court to Doc. 73-3, a "Chief" brochure, showing a "Type S" slip ring from another company. Plaintiff asserts that "[b]in sweep manufactures do not fabricate their own collector rings but purchase them from suppliers" and "depictions of the collector ring

having its own casing in the asserted patents is consistent with that ordinary and customary usage of the term for an off-the-shelf piece part as purchased from a supplier.” Doc. 77 at 17.

Plaintiff’s argument asks the court to adopt its proposed construction based solely on an attorney’s argument—something the court cannot do. *See, e.g., Verinata Health, Inc. v. Ariosa Diagnostics, Inc.*, 830 F.3d 1335, 1341 (Fed. Cir. 2016) (rejecting a party’s proposed interpretation of an agreement because it had presented no extrinsic evidence to support it, just attorney argument) (citation and internal quotation marks omitted); *Va. Innovation Scis., Inc. v. Samsung Elec. Co., Ltd.*, 614 F. App’x 503, 511 (Fed. Cir. 2015) (explaining that when a court construes a patent’s claim terms, “attorney arguments are not relevant intrinsic or extrinsic evidence”); *Phillip M. Adams & Assocs., LLC v. Dell, Inc.*, No. 1:05-cv-64 TS, 2008 WL 7959085, at *23 (D. Utah Sept. 29, 2008) (finding that it is “insufficient” for plaintiff to offer “only pure attorney argument” to support its proposed construction of a claim term). The court rejects this argument and declines to use it to construe the claims.

After considering the plain language of the claims, the specification, and the prosecution history, the court concludes the intrinsic evidence supports most of plaintiff’s proposed construction. But, in contrast, the court does not construe “collector ring” necessarily to include a casing. *See C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 865 (Fed. Cir. 2004) (“Under our precedent, a patentee’s choice of embodiments can shed a light on the intended scope of the claim, but a patent claim term is not limited merely because the embodiments in the specification all contain a particular feature.”). In holding that the collector ring and housing are separate, the court notes that plaintiff has conceded a collector ring could include—but does not have to include—a casing. Doc. 77 at 21. And, the court must be wary of importing limitations from the specifications into the claims. The court thus construes the term “collector ring” to mean “[a]n

electromechanical device also called a ‘slip ring’ that allows the transmission of power and/or electrical signals from a stationary to a rotating structure. Further, a ‘housing’ recited in the claims of the asserted patents is separate from any casing, enclosure, or the like that, if present, is not part of the recited ‘collector ring’ itself.”

B. “a pivot stand attached to a top surface of the floor grate”

Term	Plaintiff’s Construction	Defendant’s Construction
A pivot stand attached to a top surface of the floor grate	Give plain and ordinary meaning. No construction needed.	The pivot stand is a separate structure from the floor grate that is fastened to at least the top surface of the floor grate.

The parties dispute whether the term “a pivot stand attached to a top surface of the floor grate” requires construction. The disputed term appears in independent Claim 1 of the ’823 patent. It provides:

An apparatus for attachment to a floor grate, the apparatus comprising . . . a pivot stand attached to a top surface of the floor grate, the pivot stand defining a vertical pivot axis.

Doc. 61-1 at 10 (’823 patent, Claim 1).

Plaintiff urges the court to decline construction. In plaintiff’s view, the dispute centers around the phrase “attached to a top surface.” Doc. 77 at 22. And defendant appears to agree. Doc. 79 at 8. But, defendant contends a dispute exists and it turns on the scope of the term “attached to a top surface.” *Id.* at 8–9.

Plaintiff asserts the term needs no construction and that the court is not obliged to construe a term when its meaning is plain. *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1368 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elec. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015) (noting that the court did not err in declining to construe a term when the term

was “straightforward”). Plaintiff notes the phrase contains no technical jargon and uses “attached,” “to,” and “top surface” in an ordinary way.¹

Plaintiff takes issue with the word “fastened” in defendant’s proposed construction. In plaintiff’s view, “attached” does not suggest any particular attachment mechanism, whereas “fastened” implies use of mechanical fasteners. Plaintiff emphasizes that the ’823 patent allows for other possible implementations. Doc. 73-1 at 8 (col. 2 ll. 47–54). Thus, plaintiff argues, the term “attached to a top surface,” encompasses attachment to a top surface using fasteners, but the court should not limit the term to use of fasteners. Plaintiff makes much of what the term does not say, providing many permutations of the phrase to show that defendant’s construction impermissibly narrows the term. On this point, the court agrees with plaintiff.

Defendant argues that the term requires the stand to be attached to the top surface, not some other surface of the floor grate or indirectly attached through another connection. For support, defendant turns first to the claim language: “The apparatus comprises a pivot stand attached to a top surface of the floor grate, the pivot stand defining a vertical pivot axis.” Doc. 73-1 at 8 (col. 2 ll. 5–7). Defendant also points to plaintiff’s provisional application, where a drawing shows the pivot stand attached to the top surface of a floor grate. Doc. 73 at 21. Defendant notes that “statements that describe the invention as a whole . . . are more likely to support a limiting definition of a claim term.” *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d

¹ Plaintiff also makes other arguments to support its position. It notes that the phrase “a pivot stand attached to a top surface of the floor grate” distinguished prior art. Prior art had the pivot stand attached to a location below the floor grate and “lacked any attachment of the pivot stand to the top surface of the floor grate.” Doc. 77 at 25. Plaintiff also notes that the prosecution history reveals no special meaning for the phrase. Finally, plaintiff notes that the ’823 patent contains the word “comprising,” which, it argues, allows a finding of infringement “despite the presence of additional (*i.e.*, unclaimed) elements in an accused product.” *Id.* at 34; *see also Crystal Semiconductor Corp. v. Tritech Microelectronics Intern., Inc.*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (“In the parlance of patent law, the transition ‘comprising’ creates a presumption that the recited elements are only a part of the device, that the claim does not include additional, unrecited elements.”). Defendant does not address these arguments, instead arguing that the dispute here goes to the scope of the claim language.

858, 864 (Fed. Cir. 2004). Defendant cites other places in the '823 patent where plaintiff used more specific language about “attachment.” For example, collector rings are mounted to a pivot stand “which is fixedly attached, such as by bolts, to the top surface of the center grate.” Doc. 73-1 at 9 (col. 4 ll. 11–13). Also, “[p]ivot stand 32 is typically bolted onto the center grate” *Id.* (col. 4 ll. 26). And, the “pivot stand is integrally formed with grate 34.” *Id.* (col. 4 ll. 27–28). Defendant expresses concern about plaintiff’s desire to use the plain and ordinary meaning of the term because defendant is not sure what plaintiff considers “plain and ordinary.” Defendant considers “attached” and “fastened” to be synonyms. Defendant’s aim, it says, is to prevent plaintiff from later arguing that the phrase “attached to the top surface” includes items attached somewhere “other than” the top surface. Doc. 79 at 9. Defendant asserts that including more specific language in the device description supports its conclusion that the court should narrowly construe the term.

The court cannot read particular embodiments into the claims “when the claim language is broader than such embodiments.” *Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994) (“[P]articular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments.”); *see also Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1373 (Fed. Cir. 2007) (warning that courts should not “import[] limitations from the specification into the claims absent a clear disclaimer of claim scope.”); *Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1364 (Fed. Cir. 2003) (explaining that a patent’s written description “is not a substitute for, nor can it be used to rewrite, the chosen claim language. Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.”). While the specification here depicts two

possible embodiments, the court cannot construe the claim language narrowly. This is so because a preferred embodiment's scope can be narrower than the claimed device. But, the court is persuaded that some construction is necessary to clarify the scope of the term "attached to a top surface." *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) ("A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute.").

The Federal Circuit has interpreted the meaning and scope of the word "attached" on several occasions. *See, e.g., Tinnus Enters., LLC v. Telebrands Corp.*, 846 F.3d 1190, 1204 (Fed. Cir. 2017) (district court's construction of "plain and ordinary meaning" for "'attached,' i.e., 'connected or joined to something'" was not error); *Southco, Inc. v. Fivetech Tech., Inc.*, 611 F. App'x 681, 686 (Fed. Cir. 2015) (finding that "attached" meant "direct attachment."). And district courts also have construed the term. *See, e.g., Crocs, Inc. v. Effervescent, Inc.*, No. 06-cv-00605-PAB-KMT, 2017 WL 2787589, at *7 (D. Colo. June 27, 2017) (giving "attached" its "ordinary and customary meaning"); *Emazing Lights, LLC v. Ramiro Montes de Oca*, No. SACV 15-01561-AG-Ex, 2016 WL 3475330, at *5 (C.D. Cal. May 3, 2016) (construing "attached" to mean "joined, fastened, or connected").

After considering the plain language of the claims, the specification, and the prosecution history, the court agrees with plaintiff. The phrase "attached to a top surface" should receive its plain and ordinary meaning. But, the court finds the plain and ordinary meaning of "attached" is broad and means "joined, fastened, or connected." *See generally id.* The court thus adopts plaintiff's construction and gives the term "a pivot stand attached to a top surface" its plain and ordinary meaning. The court thus construes "attached" to mean "joined, fastened, or connected."

III. Conclusion

The court has construed the disputed patent claim terms at the parties' request. After reviewing the parties' submissions and considering the arguments presented at the *Markman* hearing, the court construes the disputed claim terms in accordance with this Order. The court provides its construction for each term in the chart below.

Term	Court's Construction
Sweep mechanism	A mechanism for moving solid material, including an auger with flighting, a chain with paddles, a belt, a cleated belt, or the like.
Linear conveyor	A mechanism for moving solid material, including an auger with flighting, a chain with paddles, a belt, a cleated belt, or the like.
Extending above a top surface of the floor grate	The given element extends above the top surface of the floor grate, but is not necessarily attached to the top surface of the floor grate.
Collector Ring	An electromechanical device also called a 'slip ring' that allows the transmission of power and/or electrical signals from a stationary to a rotating structure. Further, a 'housing' recited in the claims of the asserted patents is separate from a casing, enclosure, or the like that, if present, is not part of the recited 'collector ring' itself.
A pivot stand attached to a top surface of the floor grate	Use plain and ordinary meaning. But, "attached" means "joined, fastened, or connected."

IT IS THEREFORE ORDERED BY THE COURT THAT the disputed terms of the '823, '001, and '338 patents are construed as set forth in this Order.

IT IS SO ORDERED.

Dated this 3rd day of December, 2019, at Kansas City, Kansas.

s/ Daniel D. Crabtree
Daniel D. Crabtree
United States District Judge